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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: **Sau-Gee Chen and Chieh-Chih Li**

Examiner: Emmanuel L. Moise

Art Unit: 2133

Patent Application No.: 08/510,740

Our Ref: B-2750 (615179-4/RPB)

Filed: August 2, 1995

Date: July 20, 2001

For: "METHOD FOR FINDING QUOTIENT IN A DIGITAL SYSTEM"

Re: APPLICANT'S SUPPLEMENTAL REPLY TO THE EXAMINER'S SUPPLEMENTAL ANSWER

Honorable Commissioner of Patents and Trademarks
Washington, D.C. 20231

Dear Sir:

This Application is presently on appeal to the Board of Patent Appeals and Interferences. On February 28, 2000, the Board issued a per curiam decision remanding this Application for reconsideration by the Examiner in view of the recent decisions of the Court of Appeals for the Federal Circuit noted by the Board in the per curiam decision.

More than one year later, in spite of repeated requests by the Applicant concerning the status of this Application, the Examiner presently in charge of this Application finally issued a two-page supplemental Examiner's answer on May 22, 2001. This paper is in reply to the Supplemental Examiner's Answer.

The Examiner's Analysis of the *State Street Bank* decision and the *AT&T v. Excel Communications* decision is flawed.

The Examiner asserts that the *State Street Bank* case stands for the proposition that "the transformation of data, representing discreet dollar amounts, by a machine to a series of mathematical calculations into a final share price, constitutes a practical application of a

mathematical algorithm, formula, or calculation, because it produces 'a useful, concrete and tangible result'" The *State Street Bank* case, in short, stands for the proposition that business method software can be patented, if it meets the "useful, concrete and tangible result" set forth in the *State Street Bank* case. The Examiner, falls into error, in asserting that all software must produce a number which has a "specific meaning" (See the Supplemental Answer, page 2, line 9) in order to be patentable. Nothing can be further from the truth. *State Street Bank* does not overrule *In re Alappat* nor does it impose a new requirement that all software must produce a number which has a specific meaning. Rather *State Street Bank* is expansive in clarifying that business method software is patentable.

Consider the Court's decision in *In Re Alappat* (31 USPQ 2d 1545 (CAFC 1994)). The Applicant herein has argued consistently in both its Appeal Brief and in the Reply dated June 2, 1997, that the decision in *In Re Alappat* supports the patentability of the claims presently before the Board, a position which the Examiner has not been able to overcome.

The invention in the *In Re Alappat* case involved a means for creating a smooth wave-form display in a digital oscilloscope. *Alappat's* invention employed an anti-aliasing system, wherein each vector making up the wave-form is represented by modulating the illumination intensity of pixels having center points boundering on the trajectory of the vector. The result is an improvement in an oscilloscope comparable to a television having a clear picture. Of course, a television can have a clear picture, without reference to the particular program which is being watched, and, in a similar vein, *Alappat's* system can provide a clear representation of a wave-form on the screen of an oscilloscope without reference to the particular data reflected by the wave-form. In terms of the *Alappat* invention, the algorithms used therein, produce numbers which have "no specific meaning" (see the Examiner's Supplemental Answer at page 2, line 9, thereof). However the Examiner basically takes the viewpoint that *State Street Bank* and *AT&T Corp v. Excel Communications* overrule *In Re Alappat* by imposing a new requirement that the

data have a "specific meaning." The Examiner asserts that the data produced by Applicant's invention has no "specific meaning" and thus, the invention is not patentable. In *Alappat*, the wave-forms which are clarified by *Alappat's* invention obviously relate to data, which has as much specific meaning as the data produced by the present invention.

An invention in *In Re Alappat* allows that data to be perceived more clearly, but the data displayed on the screen of the CRT reflects numbers , which have no specific meanings in the context of the *Alappat* invention.

If the board agrees with the Examiner's flawed analysis set forth in the Supplemental Examiner's Answer, then the Board must take the position that *In Re Alappat* has been overruled by *State Street Bank* and/or *AT&T v. Excel Communications*. Of course, there is nothing in those decisions which says that *In Re Alappat* has been overruled. Nothing is further from the truth.

Section 101 of our Patent Statute reads:

> "Whoever invents or discovers <u>any</u> new and useful process, machine, manufacture or composition of matter, or any new and useful improvement thereof, may obtain a patent therefore, subject to conditions and requirements of this title."

As the Court indicated in the *State Street Bank* case, the repetitive use of the expansive term "any" in Section 101, shows Congress's intent not to place any restrictions on the subject matter for which a patent may be obtained, beyond those specifically recited in Section 101. In the *State Street Bank* decision, the Court approvingly cites *In Re Alappat* noting that "data, transformed by a machine through a series of mathematical calculations to produce a smooth wave-form display on a rastorizer monitor, constituted a practical application of an abstract idea (a mathematical algorithm, formula or calculation), because it produced "a useful, concrete and tangible result, –

the smooth wave-form. (See, 47 USPQ 2d at 1601.) There is nothing in the *State Street Bank* case which says that the numbers represented by wave-form in Alappat must have "a specific meaning". Rather, this is a new requirement which the Examiner tries to read into the Court's decisions in *State Street Bank* and *Excel Communications*.

The present invention is useful, concrete and it produces a tangible result, namely, that the data processing occurs more quickly than it does in the prior art. The Board of Appeals can take judicial notice of the fact that companies, such as Intel, IBM and Motorola, go to great lengths to try to speed up the speed of their processors in order to process data more quickly. Whether the speeding up occurs in hardware or in software, or in some combination of the two, the end result is "useful, concrete and tangible" to the user irrespective of how the speeding up actually occurs.

As such, the present invention meets the "useful, concrete and tangible result" test of *Alappat*, *State Street Bank* and *AT&T v. Excel Communications*.

The Examiner's analysis is clearly flawed. *State Street Bank* and *AT&T v. Excel Communications* do not overrule *In Re Alappat*. Rather, they cite *In Re Alappat*, approvingly. The Examiner's requirement that the software must produce a number which has a "specific meaning" is a requirement of the Examiner's, and not of the Court. If it were, then *Alappat's* invention for smoothing a wave-form on the screen of a CRT would not be patentable. With all due respect to the Examiner, the Examiner does not have standing to overrule a decision of the Court of Appeals for the Federal Circuit.

The Commissioner is authorized to charge any additional fees which may be required or credit overpayment to deposit account no. 12-0415. In particular, if this response is not timely filed, then the Commissioner is authorized to treat this response as including a petition to extend the time period pursuant to 37 CFR 1.136 (a) requesting an extension of time of the number of months necessary to make this response timely filed and the petition fee due in connection therewith may be charged to deposit account no. 12-0415.

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner of Patents and Trademarks, Washington, D.C., 20231 on

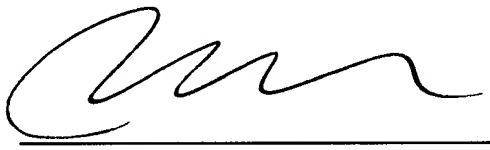
July 20, 2001
(Date of Deposit)

RICHARD P. BERG
(Name of Applicant, Assignee or Registered Representative)

(Signature)

July 20, 2001
(Date)

Respectfully submitted,



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